

## **TABLES**

## LIST OF TABLES

|               |  |
|---------------|--|
| Table 1 .     | Summary of Original Alternatives         |
| Table 2 .     | Comparison of Alternatives 1 & 4w        |
| Tables 3a-d . | Aquatic Plant Surveys                    |
| Table 3e .    | Lake Jackson Wildlife Islands Plant List |
| Table 4 .     | Mean Depths of Lakes – High Pool         |
| Table 5 .     | Mean Depths of Lakes – Alternative 1     |
| Table 6 .     | Mean Depths of Lakes – Alternative 4w    |
| Table 7 .     | Historic Freezes                         |
| Table 8 .     | Largemouth bass data from Lake Kissimmee |
| Table 9 .     | Population Characteristics table         |
| Table 10 .    | Osceola County Employment table          |

| OPTION #   | 1<br>LAKE<br>TOHO<br>+<br>3<br>LAKES | 2<br>LAKE<br>TOHO +<br>2 LAKES<br>PUMP/<br>WEIR | 3<br>LAKE<br>TOHO<br>ONLY<br>WITH<br>PUMP | 4<br>#1 W/NO<br>RELEASE<br>FROM<br>EAST<br>LAKE<br>TOHO | 4w<br>#4<br>GRAVITY<br>FLOW W/<br>FLEX.<br>REFILL | 4z<br>#4<br>GRAVITY<br>FLOW W/<br>HIGHER<br>LAKE<br>LEVELS | 5<br>PUMP<br>METHOD<br>W/ NO<br>RELEASE<br>FROM<br>EAST<br>LAKE<br>TOHO | 6<br>#3 W/ NO<br>RELEASE<br>FROM<br>EAST<br>LAKE<br>TOHO | 7<br>#4<br>W/ PUMP<br>TO EAST<br>LAKE<br>TOHO | 8<br>#5<br>W/ PUMP<br>TO EAST<br>TOHO | 9<br>#6<br>W/<br>PUMP<br>TO<br>EAST<br>TOHO |
|--|--------------------------------------|---|---|---|---|--|---|--|---|---------------------------------------|---|
| FEATURES   |                                      |   |   |   |   |  |   |  |   |                                       |   |
| LAKE TOHO TO 48.5 FT, NGVD                                     | YES                                  | YES   | YES                                       | YES   | YES*  | YES*   | NO  | YES  | YES   | YES                                   | YES   |
| LAKES KISSIMMEE, HATCHINEHA, & CYPRESS TO 48.0 FT, NGVD        | YES                                  |   |   | YES   | YES*  | YES*   | NO  |  | YES   |                                       |   |
| LAKE KISSIMMEE TO 51.0 FT                                      |                                      | YES   |   |   |   |  |   | YES  |   | YES                                   |   |
| MAINTAIN LAKE KISSIMMEE TO 51.0 FT, NGVD FROM 1/15 TO 3/1      |                                      | YES   |   |   |   |  |   | YES  |   | YES                                   |   |
| ONLY LAKES HATCHINEHA & CYPRESS DRAWDOWN TO 48.0 FT, NGVD      |                                      | YES   |   |   |   |  | YES   |  |   | YES                                   |   |
| PUMPS BETWEEN LAKES KISSIMMEE & HATCHINEHA (C-37)              |                                      | YES   |   |   |   |  |   | YES  |   |                                       | YES   |
| PUMPS AT S-61 (LAKE TOHO PUMPING TO DOWNTREAM)                 |                                      |   | YES                                       |   |   |  |   | YES  |   |                                       | YES   |
| EAST LAKE TOHO HELD AT 56.5 FT, NGVD FROM LATE APRIL TO 1 JUNE |                                      |   |   | YES   |   |  |   | YES  |   | YES                                   | YES   |
| PUMPS AT S-59 (LAKE TOHO PUMPING TO UPSTREAM)                  |                                      |   |   |   |   |  |   |  | YES   | YES                                   | YES   |
| LAKE TOHO REFILL BEGINNING 1 JUNE                              | YES                                  | YES   | YES                                       | YES   | YES   | YES  | YES   | YES  | YES   | YES                                   | YES   |
| LAKES KISSIMMEE, HATCHINEHA, & CYPRESS REFILL BEGINNING 1 JUNE | YES                                  | YES   | YES                                       | YES   | YES   | YES  | YES   | YES  | YES   | YES                                   | YES   |
| PUMP COST ESTIMATE   | 0                                    | 925,290   | 834,530                                   | 0   | 0   | 0  | 925,290   | 834,530  | 169,050                                       | 925,290                               | 834,530                                     |

\*In option 4w, Lakes Toho, Kissimmee, Hatchineha, and Cypress will be lowered to 49.0 feet, NGVD by 15 February. From 15 February to 1 June, Lake Toho will be allowed to be lowered to 48.5 feet, NGVD, and Lakes Kissimmee, Hatchineha, and Cypress will be allowed to be lowered to 48.0 feet, NGVD.

Table 1 – Summary of Original Alternatives Considered

TABLE 2

The following table provides a comparison of Alternatives 1 and 4w.

| Feature   | Alternative 1 | Alternative 4w |
|---|---------------|----------------|
| Lake Tohopekaliga drawdown to 48.5 feet, NGVD   | YES           | NO             |
| Lakes Kissimmee, Hatchineha, & Cypress drawdown to 48.0 feet, NGVD  | YES           | NO             |
| Lake Tohopekaliga drawdown to 49.0 feet, NGVD with lowering to 48.0 feet, NGVD during period from 16 February to 1 June if releases to Kissimmee River are necessary                        | NO            | YES            |
| Lakes Kissimmee, Hatchineha, and Cypress drawdown to 49.0 feet, NGVD with lowering to 48.0 feet, NGVD during period from 16 February to 1 June if releases to Kissimmee River are necessary | NO            | YES            |
| East Lake Tohopekaliga declines from 58.0 feet, NGVD on 15 March to 56.5 feet, NGVD on 1 June (lake allowed to remain higher than approved regulation schedule)                             | NO            | YES            |
| From 16 February to 1 September, East Lake Tohopekaliga (S-59), Lake Tohopekaliga (S-61), and Lake Kissimmee (S-65) releases may be made to provide flows downstream                        | NO            | YES            |
| Lake Tohopekaliga refill beginning on 1 June  | YES           | YES            |
| Lakes Kissimmee, Hatchineha, & Cypress refill beginning on 1 June   | YES           | YES            |

Table 3a Lake Toho Aquatic Plant Survey

| Scientific Name                      | Common Name           | 1983  | 1984 | 1986 | 1988  | 1990 | 1992 | 1995 |
|--------------------------------------|-----------------------|-------|------|------|-------|------|------|------|
| <i>Aldrovanda stricta</i>            | bladderworts          |       |      | (6)  | 200.3 | 570  | 540  | 2    |
| <i>Azolla caroliniana</i>            | mosquito fern         | 2.5   | 3    | 0.1  |       | 75   |      | 83   |
| <i>Bacopa caroliniana</i>            | lemon bacopa          |       |      |      | 0.2   |      |      | 150  |
| <i>Bacopa monnieri</i>               | smooth water-hyssop   |       |      |      | 0.1   | 20   |      | 3    |
| <i>Bidens spp.</i>                   | beggar ticks          |       |      |      |       |      |      |      |
| <i>Cabomba caroliniana</i>           | fanwort               |       |      |      |       |      | 0.1  |      |
| <i>Carex spp.</i>                    | sedge spp.            |       |      |      |       |      |      | 2    |
| <i>Ceratophyllum demersum</i>        | coontail              | 100   | 112  | 3    |       |      | 150  | 665  |
| <i>Cicuta bulbifera</i>              | water hemlock         |       |      |      |       |      |      |      |
| <i>Colocasia esculenta</i>           | taro                  | 0.2   | 0.2  | 0.2  |       |      |      | 1    |
| <i>Cyperus articulatus</i>           | jointed flatsedge     |       |      |      | 13.2  | 0.2  |      | 62   |
| <i>Cyperus spp.</i>                  | sedge spp.            |       | 10   |      | 0.1   | 0.1  |      |      |
| <i>Echinochloa spp.</i>              | grass                 |       |      |      | 29    |      |      |      |
| <i>Festuca densa</i>                 | brazilian fescue      |       |      |      | 0.5   |      |      |      |
| <i>Glossy Cyperus</i>                | water hyacinth        | 304   | 200  | 0    | 0.8   | 5    | 20   | 310  |
| <i>Eleocharis spp.</i>               | spikerush spp.        |       | 72   |      | 119.2 | 90   | 85.1 | 110  |
| filamentous algae spp.               | slime                 |       |      |      | 191.2 |      |      | 230  |
| <i>Fuirena spp.</i>                  | fuirena rush          |       |      |      |       | 0.1  | 0.1  | 2    |
| <i>Glyceria verticillata</i>         | water millet          | 310   | 350  | 26   | 26    | 2200 | 2600 | 150  |
| <i>Hydrocotyle spp.</i>              | pennywort             | 7.8   | 10   |      | 0.2   |      | 85   | 60   |
| <i>Hydrocharis morsus-ranae</i>      | hydrophile            |       |      |      | 0.1   |      |      |      |
| <i>Juncus effusus</i>                | soft rush             |       |      |      | 6.2   |      | 0.2  | 25   |
| <i>Leersia hexandra</i>              | southern cut grass    |       |      |      |       |      |      | 0.1  |
| <i>Lemna spp.</i>                    | duckweed              | 0.3   | 10   | 1    | 0.2   | 5    | 5    | 730  |
| <i>Limnobium spongia</i>             | frog's bit            |       |      |      | 0.1   |      | 0.1  | 23   |
| <i>Littorella sessiliflora</i>       | tiny spike            |       |      |      | 0.1   |      |      |      |
| <i>Ludwigia octovalvis/peruviana</i> | primrose willow       |       | 12   | 8    | 28.6  | 80   | 105  | 300  |
| <i>Ludwigia palustris/repens</i>     | water primrose        |       |      |      | 1.6   |      |      |      |
| <i>Luziola fluitans</i>              | water grass           |       | 45   |      | 629.3 | 200  |      | 290  |
| <i>Micranthemum glomeratum</i>       | baby tears            |       |      |      | 0.3   | 0.1  |      |      |
| <i>Micranthemum umbrosum</i>         | baby tears            |       |      |      |       |      |      | 0.5  |
| <i>Mikania scandens</i>              | climbing hempweed     |       |      |      | 0.1   |      | 0.1  | 34   |
| <i>Myriophyllum spicatum</i>         | parrot feather        | 0.6   | 3    | 0.1  | 0.1   |      |      |      |
| <i>Najas guadalupensis</i>           | southern naiad        |       |      |      |       | 10   |      |      |
| <i>Nelumbo lutea</i>                 | American lotus        | 841   | 850  | 235  | 276   | 1200 | 2300 | 1200 |
| <i>Nuphar luteum</i>                 | spatterdock           | 26    | 35   | 15   | 71.8  | 360  | 1265 | 1090 |
| <i>Nymphaea odorata</i>              | fragrant water lily   | 0.2   | 0.1  | 1    | 1.4   | 130  | 420  | 275  |
| <i>Nymphoides aquatica</i>           | banana lily           | 0.1   | 0.5  | 0.1  | 3.7   | 15   | 125  | 47   |
| <i>Panicum hemitomon</i>             | maidencane            | 2.5   |      | 33   | 163.9 | 440  | 235  | 100  |
| <i>Paspalum repens</i>               | topnodding grass      | 29    | 63   | 21   | 67.1  | 130  | 124  | 91   |
| <i>Paspalidium germinatum</i>        | knotgrass             | 1239  | 1300 | 430  | 762.9 | 2000 | 2225 | 1435 |
| <i>Pasplum repens</i>                | water paspalum        | 0.1   |      |      | 1.2   |      |      | 5    |
| <i>Peltandra virginica</i>           | water lettuce         | 226   | 240  | 24   | 70.8  | 5    | 35   | 16   |
| <i>Polygonum densiflorum</i>         | broad leaf smartweed  |       |      |      |       |      |      | 177  |
| <i>Polygonum spp.</i>                | smartweed             | 273   | 280  | 30   | 834.2 | 775  | 715  | 90   |
| <i>Pontederia cordata</i>            | pickerelweed          | 363.9 | 400  | 37   | 147.8 | 695  | 1825 | 1410 |
| <i>Potamogeton illinoensis</i>       | Illinois pondweed     |       |      |      | 0.1   |      |      |      |
| <i>Sacciolepis striata</i>           | American cupscale     |       |      |      |       |      |      | 73   |
| <i>Sagittaria lancifolia</i>         | lanceleaf arrowhead   | 0.1   | 5    | 0.2  | 11.1  | 10   | 60   | 115  |
| <i>Sagittaria latifolia</i>          | duck potato           |       |      | 0.3  | 0.1   |      |      | 15   |
| <i>Salix spp.</i>                    | willow                |       |      |      | 0.1   |      | 15   | 54   |
| <i>Scirpus americanus</i>            | water sedge           | 15.5  | 10   | 0.1  | 75.3  | 500  | 510  | 1122 |
| <i>Scirpus acutus</i>                | Cliffedge sedge       |       |      |      |       |      |      | 10   |
| <i>Saururus cernuus</i>              | lizard's tail         |       |      |      |       |      |      | 0.5  |
| <i>Scirpus lacustris</i>             | Brazilian pepper      |       |      |      |       |      |      | 205  |
| <i>Scirpus californicus</i>          | giant bulrush         |       |      |      |       |      |      |      |
| <i>Scirpus cubensis</i>              | burhead bulrush       |       | 30   |      | 0.2   | 485  | 455  | 184  |
| <i>Scirpus spp.</i>                  | bulrush               | 32.7  | 10   | 7    | 92.6  |      | 610  | 2    |
| <i>Spartina bakeri</i>               | sand cord grass       |       |      | 0.3  | 1.4   | 5    |      | 1.1  |
| <i>Spirodela spp.</i>                | giant duckweeds       |       |      |      | 0.1   |      |      | 0.1  |
| <i>Thalia geniculata</i>             | fireflag              |       |      |      |       |      |      |      |
| <i>Typha spp.</i>                    | cattails              | 111.4 | 125  | 43   | 15.4  | 260  | 450  | 410  |
| <i>Utricularia vulgaris</i>          | bladderworts          |       |      |      | 1.6   | 1.6  | 320  | 200  |
| <i>Utricularia floridana</i>         | Florida bladderwort   |       |      |      |       |      |      | 14   |
| <i>Utricularia foliosa</i>           | flat stem bladderwort |       | 3    |      | 107.6 | 230  | 610  | 875  |
| <i>Utricularia gibba</i>             | cone spur bladderwort |       |      |      | 46    |      | 0.1  | 413  |
| <i>Utricularia purpurea</i>          | purple bladderwort    |       |      |      |       |      |      | 150  |
| <i>Vallisneria americana</i>         | eelgrass              | 20    | 25   | 0.2  |       | 60   | 70   | 35   |
| <i>Wolffia spp.</i>                  | water meals           |       |      |      |       |      |      | 0.5  |

Toho Drawdowns conducted 1971, 1979, 1987

Total Species Documented

|                   |    |    |    |    |    |    |    |
|-------------------|----|----|----|----|----|----|----|
| 54 Native Species | 17 | 23 | 17 | 35 | 24 | 27 | 45 |
| 15 Exotic Species | 9  | 9  | 9  | 11 | 8  | 7  | 12 |
| 69 Total Species  | 26 | 32 | 26 | 46 | 32 | 34 | 57 |

**Table 3b Lake Cypress Aquatic Plant Survey**

| Scientific Name                      | Common Name           | 1983              | 1984 | 1986 | 1988  | 1990  | 1992  | 1995 |
|--------------------------------------|-----------------------|-------------------|------|------|-------|-------|-------|------|
| <i>Aldrovanda stricta</i>            | bladderworts          | 110               | 81   | 57   | 288   | 13    | 2.1   | 20   |
| <i>Azolla caroliniana</i>            | mosquito fern         |                   | 0.3  |      |       | 0.8   | 0.1   |      |
| <i>Bacopa caroliniana</i>            | lemon bacopa          |                   |      |      | 0.1   | 3     | 6.6   | 3.2  |
| <i>Bidens spp.</i>                   | beggar ticks          |                   |      |      |       |       |       | 0.1  |
| <i>Cabomba caroliniana</i>           | fanwort               |                   |      |      |       |       |       | 2    |
| <i>Cephalanthus occidentalis</i>     | buttonbush            |                   |      |      |       | 12    | 0.1   | 0.1  |
| <i>Ceratophyllum demersum</i>        | coontail              | 1                 | 2    | 1    | 0.1   |       | 23.3  | 27   |
| <i>Ceratopteris thalictroides</i>    | wave horn fern        |                   |      |      |       |       |       | 10   |
| <i>Cicuta bulbifera</i>              | wild lily             |                   |      |      |       |       |       | 1    |
| <i>Crinum americanum</i>             | swamp lily            |                   |      |      |       |       |       | 0.2  |
| <i>Cyperus alternifolius</i>         | umbrella sedge        |                   |      |      |       |       |       |      |
| <i>Cyperus articulatus</i>           | jointed flatsedge     |                   |      |      | 6.4   | 13    | 11.2  | 5.3  |
| <i>Cyperus spp.</i>                  | sedge spp.            | 1                 |      |      | 3.3   |       | 0.1   |      |
| <i>Echinochloa spp.</i>              | grass                 |                   |      |      | 28.6  |       | 0.1   |      |
| <i>Fimbristylis cymosa</i>           | water hyacinth        | 120.5             | 65   | 16   |       | 10.8  | 5.8   | 12.5 |
| <i>Eleocharis spp.</i>               | spikerush spp.        | 22.5              | 28   | 2.5  | 16.9  | 108.2 | 36.1  | 33.5 |
| filamentous algae spp.               | slime                 |                   |      |      | 0.1   |       |       | 21   |
| <i>Fuirena spp.</i>                  | rush fuirena          | 1                 |      |      |       |       |       |      |
| <i>Gentianella lutea</i>             | broomrape             |                   |      | 1.5  | 3.1   | 4.8   | 0.1   | 2.0  |
| <i>Hydrocotyle spp.</i>              | pennywort             | 1                 | 1    | 0.5  | 21.5  | 12    | 0.2   | 2    |
| <i>Juncus effusus</i>                | soft rush             |                   |      |      | 8.6   |       | 0.4   | 0.5  |
| <i>Leersia hexandra</i>              | southern cut grass    |                   |      |      |       |       |       | 0.2  |
| <i>Lemna spp.</i>                    | duckweed              | 0.1               | 0.2  |      |       |       |       | 89.5 |
| <i>Limnobium spongia</i>             | frog's bit            |                   | 0.2  |      |       |       | 0.1   | 4    |
| <i>Ludwigia octovalvis/peruviana</i> | primrose willow       |                   | 7    | 4    | 2.4   | 9.5   | 0.6   | 4.5  |
| <i>Luziola fluitans</i>              | water grass           | 42                | 45   | 58   | 246.8 | 53    | 86.9  | 90   |
| <i>Mikania scandens</i>              | climbing hempweed     |                   |      |      |       |       |       | 5    |
| <i>Myriophyllum heterophyllum</i>    | parrot feather        |                   |      |      |       |       |       | 10   |
| <i>Najas guadalupensis</i>           | southern naiad        |                   |      |      |       | 0.2   |       |      |
| <i>Nelumbo lutea</i>                 | American lotus        | 7.5               | 47   | 10   | 4.8   | 19    | 4.5   | 3    |
| <i>Nuphar luteum</i>                 | spatterdock           | 7                 | 9.5  | 10   | 93.2  | 52    | 317   | 40   |
| <i>Nymphaea mexicana</i>             | yellow water lily     |                   |      | 0.1  |       |       | 0.1   | 0.2  |
| <i>Nymphaea odorata</i>              | fragrant water lily   |                   |      | 2    | 0.1   | 1     | 2.9   | 5    |
| <i>Nymphoides aquatica</i>           | banana lily           | 6.5               | 8    | 0.1  | 6.6   | 5     | 0.1   |      |
| <i>Panicum hemitomon</i>             | maidencane            | 60                | 70   | 5    | 12.3  | 22    | 1.6   | 3    |
| <i>Panicea polystachys</i>           | longleaf grass        | 1                 | 28   | 101  | 192   | 60    | 12    | 20.5 |
| <i>Paspalidium geminatum</i>         | knotgrass             | 136               | 125  | 25   | 111   | 81    | 20.8  | 12   |
| <i>Paspalum repens</i>               | water paspalum        |                   |      |      |       |       | 0.1   | 0.1  |
| <i>Phragmites australis</i>          | giant reed            |                   |      |      |       |       |       | 0.2  |
| <i>Pistia stratiotes</i>             | water lettuce         |                   | 16   | 35   | 102   | 10.1  | 1.1   | 1.1  |
| <i>Polygonum densiflorum</i>         | broad leaf smartweed  |                   |      |      |       |       |       | 38   |
| <i>Polygonum spp.</i>                | smartweed             | 113               | 100  | 23   | 260.9 | 51    | 32.8  |      |
| <i>Pontederia cordata</i>            | pickerelweed          | 220               | 230  | 70   | 142.5 | 179   | 254.2 | 275  |
| <i>Potamogeton illinoensis</i>       | Illinois pondweed     |                   |      |      |       |       |       | 3    |
| <i>Rhynchospora spp.</i>             | beakrushes            |                   |      |      |       |       | 4     | 5    |
| <i>Sagittaria lancifolia</i>         | lanceleaf arrowhead   | 5                 | 12   | 5    | 33.2  | 38    | 27.1  | 25   |
| <i>Sagittaria latifolia</i>          | duck potato           |                   |      | 0.1  | 0.1   | 0.5   | 0.1   | 0.5  |
| <i>Sagittaria spp.</i>               | arrowhead spp.        |                   |      |      |       | 4     |       |      |
| <i>Salix spp.</i>                    | willow                |                   |      |      | 0.1   | 0.2   | 0.1   | 0.1  |
| <i>Scirpus americanus</i>            | white bulrush         |                   | 16   | 33   | 5     | 1.1   | 20.1  | 40   |
| <i>Scirpus californicus</i>          | Brazilian bulrush     |                   |      |      |       |       |       | 65   |
| <i>Scirpus cubensis</i>              | giant bulrush         |                   |      |      |       |       |       |      |
| <i>Scirpus spp.</i>                  | burhead bulrush       |                   | 4.5  | 1    |       | 7     | 3     | 15   |
| <i>Spartina bakeri</i>               | bulrush               | 119               | 110  | 18   | 71.6  | 59    | 75.9  |      |
| <i>Thalia geniculata</i>             | sand cord grass       |                   |      |      |       |       | 0.1   | 0.1  |
| <i>Typha spp.</i>                    | fireflag              |                   |      | 0.1  |       |       | 0.1   |      |
| <i>Typha spp.</i>                    | cattails              | 91                | 100  | 52   | 61.6  | 73.5  | 132.4 | 125  |
| <i>Utricularia inflata</i>           | flat stem bladderwort |                   |      |      | 3.8   | 12    | 16.5  | 20.2 |
| <i>Utricularia gibba</i>             | cone spur bladderwort |                   |      |      | 0.1   | 1     | 5.6   | 4.5  |
| <i>Vallisneria americana</i>         | eelgrass              |                   |      | 0.1  | 0.1   | 66    | 1.4   | 2    |
| Total Species Documented             |                       | 49 Native Species | 17   | 19   | 21    | 27    | 27    | 35   |
|                                      |                       | 12 Exotic Species | 5    | 6    | 7     | 8     | 6     | 8    |
|                                      |                       | 61 Total Species  | 22   | 25   | 28    | 35    | 33    | 51   |

**Table 3c Lake Hatchineha Aquatic Plant Survey**

| Scientific Name                      | Common Name           | 1983  | 1984 | 1986 | 1988  | 1990 | 1992 | 1995  |
|--------------------------------------|-----------------------|-------|------|------|-------|------|------|-------|
| <i>Azolla filicinoides</i>           | billastron weed       |       |      | 128  | 140.3 | 13   | 15   | 0.1   |
| <i>Azolla caroliniana</i>            | mosquito fern         |       |      | 1.5  | 1.3   |      |      | 65    |
| <i>Bacopa caroliniana</i>            | lemon bacopa          |       |      |      | 0.1   | 0.1  | 4    | 7.5   |
| <i>Bidens spp.</i>                   | beggar ticks          |       |      |      |       | 4.3  |      |       |
| <i>Cabomba caroliniana</i>           | fanwort               |       |      |      |       |      |      | 0.1   |
| <i>Cephalanthus occidentalis</i>     | buttonbush            |       |      | 0.3  | 0.1   | 2    |      | 0.1   |
| <i>Ceratophyllum demersum</i>        | coontail              | 65    | 75   | 10.8 | 392.1 | 27   | 475  | 250   |
| <i>Ceratophyllum helicoides</i>      | water cornelms        |       |      | 0.6  |       |      |      |       |
| <i>Cladium jamaicense</i>            | sawgrass              |       |      |      | 0.1   |      | 0.1  |       |
| <i>Cyperus articulatus</i>           | jointed flatsedge     |       |      |      | 53.8  |      |      |       |
| <i>Cyperus spp.</i>                  | sedge spp.            | 18.2  |      | 1.1  | 0.1   |      |      |       |
| <i>Echinochloa spp.</i>              | grass                 |       |      | 9    | 9.3   |      |      |       |
| <i>Glyceria densa</i>                | Brazilian eelgrass    |       |      |      |       |      |      |       |
| <i>Glyceria maxima</i>               | water hyacinth        | 446   | 250  | 14.4 | 0.2   | 0.2  | 122  | 76.2  |
| <i>Eleocharis spp.</i>               | spikerush spp.        | 2.9   | 4.3  | 0.4  | 139.1 |      | 87   | 44    |
| filamentous algae spp.               | slime                 |       |      |      | 125.4 |      | 15   | 140.5 |
| <i>Hydrocharis morsus-ranae</i>      | hydrilla              | 75    | 30   | 70   | 204.1 | 3600 | 2600 | 1300  |
| <i>Hydrocotyle spp.</i>              | pennywort             | 29    | 25   | 0.7  | 24.9  | 3    | 8    | 4.5   |
| <i>Juncus effusus</i>                | soft rush             |       |      | 0.7  |       |      | 0.5  | 0.2   |
| <i>Leersia hexandra</i>              | southern cut grass    |       |      |      | 2     |      |      | 0.1   |
| <i>Lemna spp.</i>                    | duckweed              | 3     | 10   | 0.2  |       |      |      | 160   |
| <i>Limnobium spongia</i>             | frog's bit            | 0.2   | 0.3  |      | 0.1   | 0.2  | 12   | 9.5   |
| <i>Ludwigia octovalvis/peruviana</i> | primrose willow       |       | 15   | 22   | 27.3  | 20   | 5    | 7.5   |
| <i>Ludwigia palustris/repens</i>     | water primrose        |       |      |      | 6.8   |      |      |       |
| <i>Luziola fluitans</i>              | water grass           | 85.9  | 90   | 23   | 124.7 | 0.1  | 105  | 55    |
| <i>Mikania scandens</i>              | climbing hempweed     |       |      | 3    |       |      | 0.1  | 0.1   |
| <i>Myriophyllum aquaticum</i>        | parrot feather        | 12    | 10.2 |      |       |      |      |       |
| <i>Najas guadalupensis</i>           | southern naiad        | 1     | 1.6  | 10.5 | 0.2   |      |      |       |
| <i>Nelumbo lutea</i>                 | American lotus        | 724.5 | 750  | 480  | 462.1 | 185  | 500  | 240   |
| <i>Nuphar luteum</i>                 | spatterdock           | 38.2  | 40   | 7.4  | 68.4  | 110  | 95   | 88    |
| <i>Nymphaea mexicana</i>             | yellow water lily     |       |      |      | 0.1   | 0.1  | 0.2  | 0.1   |
| <i>Nymphaea odorata</i>              | fragrant water lily   | 0.1   | 0.2  |      | 0.1   | 0.1  | 10   | 7.5   |
| <i>Nymphoides aquatica</i>           | banana lily           | 0.3   | 0.5  | 0.1  | 1.4   | 0.1  | 2    | 0.9   |
| <i>Panicum hemitomon</i>             | maidencane            | 80    | 75   | 12.1 | 26.4  | 30   | 7    | 28.5  |
| <i>Panurus repens</i>                | topopteris            | 153   | 100  |      | 76.3  | 20   |      | 60    |
| <i>Paspalidium geminatum</i>         | knotgrass             |       |      |      | 23.5  | 91.5 | 115  | 65    |
| <i>Pasplum repens</i>                | water paspalum        | 0.8   | 1    | 1.1  | 0.5   |      | 0.3  | 0.1   |
| <i>Peltandra spp.</i>                | arum spp.             | 0.5   |      |      |       |      |      |       |
| <i>Phragmites australis</i>          | giant reed            | 1.2   | 1.5  |      | 0.6   |      |      | 0.1   |
| <i>Polygonum perfoliatum</i>         | perfoliate smartweed  | 153   | 193  | 168  | 111   | 10   |      | 25.5  |
| <i>Polygonum densiflorum</i>         | broad leaf smartweed  |       |      |      |       |      |      |       |
| <i>Polygonum spp.</i>                | smartweed             | 91    | 100  | 19.2 | 85.8  | 25   | 40   | 2.9   |
| <i>Pontederia cordata</i>            | pickerelweed          | 274   | 312  | 29   | 146.6 | 180  | 165  | 220   |
| <i>Potamogeton illinoensis</i>       | Illinois pondweed     |       |      |      |       |      |      | 0.5   |
| <i>Sacciolepis striata</i>           | American cupscale     |       |      |      |       |      |      | 2.7   |
| <i>Sagittaria lancifolia</i>         | lanceleaf arrowhead   | 0.8   | 13   | 1.6  | 32.3  | 8    | 5    | 7.5   |
| <i>Sagittaria latifolia</i>          | duck potato           |       |      | 0.5  |       | 0.1  |      | 0.1   |
| <i>Sagittaria spp.</i>               | arrowhead spp.        |       |      | 1.3  |       | 0.1  |      |       |
| <i>Salix spp.</i>                    | willow                |       |      |      |       | 7.3  | 2    | 0.5   |
| <i>Scirpus americanus</i>            | water sedge           | 15    | 14   | 8.1  | 13    | 13   | 13   | 65    |
| <i>Saururus cernuus</i>              | lizard's tail         |       |      |      |       |      |      | 0.1   |
| <i>Scirpus californicus</i>          | giant bulrush         |       |      |      |       |      |      | 250   |
| <i>Scirpus cubensis</i>              | burhead bulrush       |       |      | 30   | 2.1   | 37.9 | 16   | 35    |
| <i>Scirpus spp.</i>                  | bulrush               | 171.3 | 170  | 42.4 | 143.8 | 450  | 275  |       |
| <i>Spirodela spp.</i>                | giant duckweeds       |       |      |      | 0.1   |      |      |       |
| <i>Thalia geniculata</i>             | fireflag              | 0.3   | 0.3  |      | 0.1   |      | 0.1  | 0.5   |
| <i>Typha spp.</i>                    | cattails              | 172.5 | 165  | 66   | 208.7 | 325  | 250  | 235   |
| <i>Urogyrus aculeatus</i>            | bittergrass           | 153   | 160  |      | 36.1  | 13   | 13   |       |
| <i>Urticularia foliosa</i>           | flat stem bladderwort | 53    | 654  | 1.4  | 72.4  | 20   | 50   | 35.5  |
| <i>Utricularia gibba</i>             | cone spur bladderwort |       |      | 5    |       | 24.5 | 14   |       |
| <i>Utricularia inflata</i>           | floating bladderwort  |       |      |      |       |      |      | 0.1   |
| <i>Vallisneria americana</i>         | eelgrass              | 21    | 42   | 7.7  | 9.3   | 65   | 75   | 135   |
| Total Species Documented             |                       |       |      |      |       |      |      |       |
| 52 Native Species                    |                       | 24    | 31   | 24   | 41    | 23   | 30   | 41    |
| 10 Exotic Species                    |                       | 7     | 9    | 6    | 8     | 6    | 7    | 8     |
| 62 Total Species                     |                       | 31    | 40   | 30   | 49    | 29   | 37   | 49    |

Table 3d Lake Kissimmee Aquatic Plant Survey

| Scientific Name                      | Common Name          | 1983  | 1984 | 1986   | 1988   | 1990 | 1992 | 1995 |
|--------------------------------------|----------------------|-------|------|--------|--------|------|------|------|
| <i>Azolla filiculoides</i>           | mosquito fern        | 0.5   | 15   |        | 0.4    | 0.2  |      | 30   |
| <i>Azolla caroliniana</i>            | mosquito fern        | 54.4  | 72   | 7      | 271.4  | 30   | 5    | 46   |
| <i>Bacopa caroliniana</i>            | lemon bacopa         |       |      |        |        |      |      | 2    |
| <i>Bacopa monnieri</i>               | smooth water-hyssop  |       |      |        | 0.1    |      | 0.2  | 97   |
| <i>Bidens spp.</i>                   | beggar ticks         |       |      |        |        |      |      |      |
| <i>Cabomba caroliniana</i>           | fanwort              | 6.1   | 47   | 367.8  | 218.9  | 0.2  | 0.1  | 1.5  |
| <i>Cephalanthus occidentalis</i>     | buttonbush           |       |      | 3.5    | 108.5  | 5    |      |      |
| <i>Ceratophyllum demersum</i>        | coontail             | 18.7  | 132  | 23.8   | 73.7   | 1040 | 350  | 376  |
| <i>Cyperus articulatus</i>           | jointed flatsedge    |       |      |        | 1.2    |      |      |      |
| <i>Cyperus spp.</i>                  | sedge spp.           | 26    | 17.5 | 1.8    | 0.1    |      |      |      |
| <i>Echinochloa spp.</i>              | grass                |       |      |        | 0.2    |      |      |      |
| <i>Equisetum arvense</i>             | scouring rush        |       |      |        |        |      |      | 2    |
| <i>Equisetum palustre</i>            | variegated horsetail |       |      |        |        |      |      | 1    |
| <i>Equisetum pratense</i>            | water horsetail      | 370   | 330  | 330    | 330    | 330  | 330  | 330  |
| <i>Eleocharis spp.</i>               | spikerush spp.       | 2.4   | 2    | 51.9   | 9.1    | 100  | 10.3 | 12   |
| filamentous algae spp.               | slime                |       |      |        | 41.1   |      |      | 197  |
| <i>Fuirena spp.</i>                  | fuirena rush         |       |      |        | 0.3    | 10   |      |      |
| <i>Glyceria maxima</i>               | hydrilla             | 0.2   | 132  | 30     | 331    | 370  | 2930 | 3210 |
| <i>Hydrocotyle spp.</i>              | pennywort            | 49.7  | 38   | 25     | 22.7   | 154  | 300  | 199  |
| <i>Hypericum spp.</i>                | St. Johns wort       |       |      |        | 2.2    |      |      |      |
| <i>Juncus effusus</i>                | soft rush            | 26    | 20   |        | 0.9    |      |      | 5    |
| <i>Leersia hexandra</i>              | southern cut grass   |       |      |        | 1.2    |      |      |      |
| <i>Lemna spp.</i>                    | duckweed             | 0.6   | 0.8  | 3.5    |        |      |      | 750  |
| <i>Limnobium spongia</i>             | frog's bit           | 10.5  | 14   | 2      | 12.8   |      | 1.5  | 34   |
| <i>Ludwigia octovalvis/peruviana</i> | primrose willow      |       | 32   | 17.7   | 213.6  | 320  | 905  | 615  |
| <i>Ludwigia palustris/repens</i>     | water primrose       | 44.6  | 3    |        |        |      |      |      |
| <i>Luziola fluitans</i>              | water grass          | 903   | 1000 | 100.1  | 854.8  | 75   | 420  | 265  |
| <i>Mikania scandens</i>              | climbing hempweed    |       |      |        |        |      |      | 9    |
| <i>Najas guadalupensis</i>           | southern naiad       | 1     | 16   |        |        | 40   |      | 7    |
| <i>Nelumbo lutea</i>                 | American lotus       | 406   | 740  | 1657.1 | 2410.4 | 820  | 345  | 75   |
| <i>Nitella spp.</i>                  | stoneworts           |       |      |        |        | 15   |      |      |
| <i>Nuphar luteum</i>                 | spatterdock          | 1698  | 1800 | 1511   | 2834   | 4050 | 4600 | 1975 |
| <i>Nymphaea mexicana</i>             | yellow water lily    | 11    | 14   | 29.4   | 44.4   | 3    | 20   | 15   |
| <i>Nymphaea odorata</i>              | fragrant water lily  | 1012  | 1000 | 1095   | 2675   | 3010 | 3150 | 1580 |
| <i>Nymphaeoides aquatica</i>         | banana lily          | 13.8  | 15.5 | 10.8   | 1.6    | 15   | 1    | 20   |
| <i>Panicum hemitomon</i>             | maidencane           | 1753  | 1550 | 964    | 548.4  | 1865 | 1395 | 229  |
| <i>Panícula repens</i>               | torpedo grass        | 521.0 | 310  | 0.1    | 0.1    | 100  | 1390 | 1290 |
| <i>Paspalidium geminatum</i>         | knotgrass            | 745.3 | 1000 | 569    | 753.4  | 2770 | 2035 | 696  |
| <i>Paspalum repens</i>               | water paspalum       | 0.1   | 2.2  | 0.2    |        | 345  |      |      |
| <i>Peltandra</i> spp.                | arum spp.            | 0.2   | 0.2  |        |        |      |      |      |
| <i>Pistia stratiotes</i>             | water lettuce        | 31.3  | 10   |        | 0.3    |      |      |      |
| <i>Polygonum densiflorum</i>         | broad leaf smartweed |       |      |        |        |      |      | 140  |
| <i>Polygonum spp.</i>                | smartweed            | 72.3  | 110  | 9.5    | 312.4  | 122  | 1    |      |
| <i>Pontederia cordata</i>            | pickerelweed         | 1421  | 1565 | 261.2  | 789.3  | 716  | 1352 | 429  |
| <i>Potamogeton illinoensis</i>       | Illinois pondweed    | 72.1  | 85   | 30     | 17.6   | 560  | 1285 | 700  |
| <i>Rhynchospora</i> spp.             | beakrushes           |       |      |        |        |      | 0.1  |      |
| <i>Sacciolepis striata</i>           | American cupscale    |       |      |        |        | 50   | 0.1  | 114  |
| <i>Sagittaria lancifolia</i>         | lanceleaf arrowhead  | 133.9 | 145  | 27.7   | 277.7  | 85   | 25   | 85   |
| <i>Sagittaria latifolia</i>          | duck potato          |       |      | 0.5    | 1      |      |      | 29   |
| <i>Sagittaria</i> spp.               | arrowhead spp.       |       |      | 0.8    |        |      |      |      |
| <i>Salix</i> spp.                    | willow               |       |      |        | 13.5   | 7    | 3    | 20   |
| <i>Selaginella</i> spp.              | selaginella          | 154   | 220  | 21.2   | 26     | 50   | 91   |      |
| <i>Scirpus californicus</i>          | giant bulrush        |       |      |        |        |      |      | 55   |
| <i>Scirpus cubensis</i>              | burhead bulrush      |       | 2    | 73.8   | 82     | 85   | 225  | 372  |
| <i>Scirpus</i> spp.                  | bulrush              | 45.5  | 50   | 20.8   | 65.1   | 125  | 120  | 15   |
| <i>Spartina bakeri</i>               | sand cord grass      |       |      |        | 4.2    | 64.5 | 100  | 75   |
| <i>Spirodela</i> spp.                | giant duckweeds      |       |      |        | 0.2    |      |      |      |
| <i>Thalia geniculata</i>             | fireflag             |       | 0.3  | 0.2    | 0.1    |      |      |      |
| <i>Typha</i> spp.                    | cattails             | 829.9 | 900  | 169    | 331.1  | 695  | 625  | 874  |
| <i>Zizaniopsis miliacea</i>          | wild rice            |       |      |        |        |      |      |      |
| <i>Zizaniopsis miliacea</i>          | giant cut grass      |       |      |        | 0.1    |      |      |      |

Kissimmee Drawdowns conducted 1977 and 1996

## Total Species Documented

|                   |    |    |    |    |    |    |    |
|-------------------|----|----|----|----|----|----|----|
| 61 Native Species | 33 | 40 | 30 | 43 | 35 | 30 | 42 |
| 8 Exotic Species  | 7  | 7  | 5  | 7  | 5  | 7  | 8  |
| 69 Total Species  | 40 | 47 | 35 | 50 | 40 | 37 | 50 |

**Table 3e - Lake Jackson Wildlife Islands Plant List**

| Scientific Name              | Common Name       | Native | Invasive | Listing Organization       |
|------------------------------|-------------------|--------|----------|----------------------------|
| <i>Asclepias</i> spp.        | milk weed         | X      |          |                            |
| <i>Bacopa</i> spp.           | water hyssops     | X      |          |                            |
| <i>Bidens</i> spp.           | bur-marigold      | X      |          |                            |
| <i>Centella</i> spp.         | centella          | X      |          |                            |
| <i>Cirsium</i> spp.          | plume thistles    | X      |          |                            |
| <i>Cyperus</i> spp.          | flat sedge        | X      |          |                            |
| <i>Diodia</i> spp.           | button weed       | X      |          |                            |
| <i>Eleocharis</i> spp.       | spikerush spp.    | X      |          |                            |
| <i>Eupatorium</i> spp.       | dog fennel        | X      |          |                            |
| <i>Fimbristylis</i> spp.     | fringe rush       | X      |          |                            |
| <i>Hydrilla verticillata</i> | hydrilla          |        | X        | DEP, DACS, EPPC Category I |
| <i>Hydrocotyle umbellata</i> | water pennywort   | X      |          |                            |
| <i>Hypericum</i> spp.        | St. Johns-wort    | X      |          |                            |
| <i>Juncus</i> spp.           | rushes            | X      |          |                            |
| <i>Ludwigia octovalvis</i>   | water primrose    | X      |          |                            |
| <i>Micranthemum umbrosum</i> | baby tears        | X      |          |                            |
| <i>Mikania scandens</i>      | climbing hempweed | X      |          |                            |
| <i>Panicum hemitomon</i>     | maidencane        | X      |          |                            |
| <i>Panicum ramosum</i>       | brown top millet  | X      |          |                            |
| <i>Panicum repens</i>        | torpedo grass     |        | X        | EPPC, Category I           |
| <i>Phytolacca americana</i>  | pokeweed          | X      |          |                            |
| <i>Pluchea</i> spp.          | marsh fleabane    | X      |          |                            |
| <i>Polygonum</i> spp.        | smartweed         | X      |          |                            |
| <i>Pontederia</i> spp.       | pickerelweed      | X      |          |                            |
| <i>Sabatia calycina</i>      | marsh pink        | X      |          |                            |
| <i>Sagittaria</i> spp.       | arrowhead         | X      |          |                            |
| <i>Scirpus californicus</i>  | giant bulrush     | X      |          |                            |
| <i>Scirpus cubensis</i>      | burhead sedge     | X      |          |                            |
| <i>Typha</i> spp.            | cattails          | X      |          |                            |
| <i>Urochloa mutica</i>       | paragrass         |        | X        | EPPC, Category I           |
| <i>Stachys floridana</i>     | mint              |        |          |                            |

| MEAN DEPTHS OF LAKES<br>AT HIGH POOL ELEVATIONS |   |                         |                 |                      |
|---|---|-------------------------|-----------------|----------------------|
| Lake  | Water Surface<br>Elevation<br>(feet NGVD) | Capacity<br>(acre-feet) | Area<br>(Acres) | Mean Depth<br>(feet) |
| Tohopekaliga                                    | 55.0                                      | 145000                  | 22500           | 6.4                  |
| Cyp. & Hatch.                                   | 52.5                                      | 90000                   | 19000           | 4.7                  |
| Kissimmee                                       | 52.5                                      | 350000                  | 40400           | 8.7                  |
| Tiger   | 52.5                                      | 22000                   | 3380            | 6.5                  |

TABLE 4

| MEAN DEPTHS OF LAKES AT PROPOSED<br>DRAWDOWN WATER LEVELS IN ALTERNATIVE 1 |   |                         |                 |                      |
|--|---|-------------------------|-----------------|----------------------|
| Lake   | Water Surface<br>Elevation<br>(feet NGVD) | Capacity<br>(acre-feet) | Area<br>(Acres) | Mean Depth<br>(feet) |
| Tohopekaliga   | 48.5                                      | 33000                   | 12200           | 2.7                  |
| Cyp. & Hatch.  | 48.0                                      | 34000                   | 8700            | 3.9                  |
| Kissimmee  | 48.0                                      | 190000                  | 31000           | 6.1                  |
| Tiger  | 48.0                                      | 10000                   | 2100            | 4.8                  |

TABLE 5

| MEAN DEPTHS OF LAKES AT PROPOSED<br>DRAWDOWN WATER LEVELS IN ALTERNATIVE 4W |   |                         |                 |                      |
|---|---|-------------------------|-----------------|----------------------|
| Lake  | Water Surface<br>Elevation<br>(feet NGVD) | Capacity<br>(acre-feet) | Area<br>(Acres) | Mean Depth<br>(feet) |
| Tohopekaliga  | 49.0                                      | 42000                   | 13500           | 3.1                  |
| Cyp. & Hatch.   | 49.0                                      | 43000                   | 9900            | 4.3                  |
| Kissimmee   | 49.0                                      | 223000                  | 31600           | 7.1                  |
| Tiger   | 49.0                                      | 12500                   | 2180            | 5.7                  |

TABLE 6

**Table 7**

Lakes Toho, Kissimmee, Hatchineha, and Cypress Historic Freezes and associated stages since construction of C&SF Project

| Date of Freeze  | Minimum Temperature (F) Recorded |         | Approximate Lake Toho Stage (ft., NGVD) | Approximate Lake Kissimmee, Hatchineha, & Cypress Stage (ft, NGVD) |  |  |
|-----------------|----------------------------------|---------|---|--|--|--|
|                 | Location                         |         |   |  |  |  |
|                 | Kissimmee                        | Orlando |   |  |  |  |
| Dec 30, 1961    | NR                               | 29      | 49.7                                    | 45.9   |  |  |
| Dec 11-16, 1962 | 20                               | 20      | 50.2                                    | 47.0   |  |  |
| Nov 24-25, 1970 | 29                               | 30      | 51.8                                    | 50.8   |  |  |
| Jan 20-21, 1971 | 25                               | 28      | 51.6                                    | 50.3   |  |  |
| Jan 19-21, 1977 | 23                               | 20      | 54.4                                    | 50.2   |  |  |
| Feb 1, 1979     | 32                               | 33      | 51.0                                    | 50.9   |  |  |
| Mar 3, 1980     | 25                               | 25      | 54.0                                    | 50.8   |  |  |
| Jan 12-14, 1981 | 21                               | 20      | 52.5                                    | 49.3   |  |  |
| Jan 11-12, 1982 | 23                               | 23      | 54.7                                    | 49.2   |  |  |
| Dec 25-26, 1983 | 21                               | 20      | 55.1                                    | 52.4   |  |  |
| Jan 21-22, 1985 | 19                               | 19      | 53.9                                    | 50.8   |  |  |
| Jan 24, 1987    | 30                               | 32      | 51.2                                    | 51.2   |  |  |
| Dec 24-25, 1989 | 22                               | 20      | 54.2                                    | 51.6   |  |  |
| Feb 4-5, 1996   | 27                               | 26      | 55.3                                    | 45.5   |  |  |
| Dec 20-21, 2000 | 28                               | 28      | 53.7                                    | 49.1   |  |  |
|                 |                                  |         |   |  |  |  |

Note: Rogers and Rohli (1991) indicate that from 13-14 December 1962, the freeze which occurred was the most damaging Florida freeze this century. From 13-14 January 1981, widespread citrus and foliage damage occurred. From 11-12 January 1982, most of Florida experienced a hard freeze. Citrus and vegetable damage was severe, and defoliation and wood damage were reported. From 25-26 December 1983, a severe freeze occurred in all areas. Fruit were frozen, and there was defoliation, wood damage, and considerable tree mortality in the north. The freeze of 21-22 January 1985 was a severe freeze; fruit, leaf, and wood damage occurred even after a distinct southward shift in citrus production since 1983. The freeze of 24-25 December 1989 was a hard freeze in all citrus areas, with minimal damage in south Florida and variable foliage/fruit damage elsewhere. According to Henry et al (1994), in the January 1977 freeze, although most citrus trees had developed coldhardiness which prevented extensive tree damage, 98% of all oranges were frozen. They note that for Orlando the approximate start of the freezing season is 11 December and approximate end date is 19 February.

**Estimated total number, percent (%) and cumulative percent of largemouth bass at each age and year class from fish sampled during March 2001 at Lake Kissimmee.**

| Age | Year Class | Number | Percent | Cumulative Percent |
|-----|------------|--------|---------|--------------------|
| 1   | 2000       | 339    | 31      | 31                 |
| 2   | 1999       | 202    | 19      | 50                 |
| 3   | 1998       | 209    | 19      | 69                 |
| 4   | 1997       | 184    | 17      | 86                 |
| 5   | 1996       | 81     | 8       | 94                 |
| 6   | 1995       | 20     | 2       | 96                 |
| 7   | 1994       | 15     | 1       | 97                 |
| 8   | 1993       | 26     | 2       | 99                 |
| 9   | 1992       | 14     | 1       | 100                |

**Table 8**

See section 4.5 for more information on study presented in above table

**Table 9**  
**Population Characteristics**

|   | Osceola County | State of Florida |
|---|----------------|------------------|
| Population, 2000  | 172,493        | 15,982,378       |
| Population, percent change, 1990 to 2000                    | 60.10%         | 23.50%           |
| Persons under 5 years old, percent, 2000                    | 6.80%          | 5.90%            |
| Persons under 18 years old, percent, 2000                   | 26.80%         | 22.80%           |
| Persons 65 years old and over, percent, 2000                | 11.40%         | 17.60%           |
| White persons, percent, 2000                                | 77.20%         | 78.00%           |
| Black or African American persons, percent, 2000            | 7.40%          | 14.60%           |
| American Indian and Alaska Native persons, percent, 2000    | 0.50%          | 0.30%            |
| Asian persons, percent, 2000                                | 2.20%          | 1.70%            |
| Native Hawaiian and Other Pacific Islander, percent, 2000   | 0.10%          | 0.10%            |
| Persons reporting some other race, percent, 2000            | 9.10%          | 3.00%            |
| Persons reporting two or more races, percent, 2000          | 3.60%          | 2.40%            |
| Female population, percent, 2000                            | 50.70%         | 51.20%           |
| Persons of Hispanic or Latino origin, percent, 2000         | 29.40%         | 16.80%           |
| White persons, not of Hispanic/Latino origin, percent, 2000 | 59.60%         | 65.40%           |
| High school graduates, persons 25 years and over, 1990      | 51,737         | 6,616,094        |
| College graduates, persons 25 years and over, 1990          | 7,873          | 1,624,405        |
| Housing units, 2000   | 72,293         | 7,302,947        |
| Homeownership rate, 2000                                    | 67.70%         | 70.10%           |
| Households, 2000  | 60,977         | 6,337,929        |
| Persons per household, 2000                                 | 2.79           | 2.46             |
| Households with persons under 18 years, percent, 2000       | 40.70%         | 31.30%           |
| Median household money income, 1997 model-based estimate    | \$32,552       | \$32,877         |
| Persons below poverty, percent, 1997 model-based estimate   | 13.40%         | 14.40%           |
| Children below poverty, percent, 1997 model-based estimate  | 21.80%         | 21.80%           |

**Table 10**  
**Osceola County Employment**

| NAICS code | Description  | Establishments | Sales, receipts or shipments (\$1,000) | Annual payroll (\$1,000) | Paid employees |
|------------|--|----------------|--|--------------------------|----------------|
| 21         | Mining (not published for counties)                                | N              | N                                      | N                        | N              |
| 22         | Utilities (not published for counties)                             | N              | N                                      | N                        | N              |
| 23         | Construction (not published for counties)                          | N              | N                                      | N                        | N              |
| 31-33      | Manufacturing  | 77             | 379,892                                | 37,107                   | 1,295          |
| 42         | Wholesale trade  | 108            | 1,070,100                              | 41,321                   | 1,499          |
| 44-45      | Retail trade   | 612            | 1,349,700                              | 124,762                  | 8,289          |
| 48-49      | Transportation & warehousing (not published for counties)          | N              | N                                      | N                        | N              |
| 51         | Information (total not published for counties)                     | N              | N                                      | N                        | N              |
| 52         | Finance & insurance (not published for counties)                   | N              | N                                      | N                        | N              |
| 53         | Real estate & rental & leasing                                     | 234            | 274,745                                | 60,416                   | 2,884          |
| 54         | Professional, scientific, & technical services                     | 172            | 50,289                                 | 18,791                   | 758            |
| 55         | Management of companies & enterprises (not published for counties) | N              | N                                      | N                        | N              |
| 56         | Administrative & support & waste management &remediation services  | 168            | 85,557                                 | 36,161                   | 2,329          |
| 61         | Educational services   | 19             | 3,985                                  | 1,001                    | 50             |
| 62         | Health care & social assistance                                    | 252            | 241,284                                | 103,751                  | 4,024          |
| 71         | Arts, entertainment, & recreation                                  | 65             | 87,756                                 | 24,676                   | 1,336          |
| 72         | Accommodation & foodservices                                       | 423            | 762,955                                | 152,219                  | 12,152         |
| 81         | Other services (except public administration)                      | 207            | 55,592                                 | 16,404                   | 923            |